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Update of Mapping of EU funds to Digital Decade targets 2021-2027

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Contents

Abstract

This report updates the data and findings of Signorelli et al. (2024) regarding the EU's long-term budget with potential to affect the Digital Decade (DD) targets and objectives. We provide updated data and figures on the 5 main Funding Instruments – Recovery and Resilience Facility, Cohesion Policy, Horizon Europe, Digital Europe Programme and Connecting Europe Facility-Digital. We estimate a DD-target related budget of around €177 bn and a budget funding Digital Decade general objectives of €29.5 bn out of a total budget of €973 bn. As in the previous exercise, the targets that receive the largest amount of budget are the digitalisation of public services and businesses, which receive around 64% of the total mapped budget with potential to impact Digital Decade targets. At Member State level, we find that Spain, Italy and Greece are the countries that receive the largest RRF and CP budget in per capita terms, while the distribution of budget across targets is homogeneous across countries, with a strong focus on the digitalisation of public services.

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Any remaining errors are the responsibility of the authors.

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1 Introduction

The 2021-2027 EU budget (MFF) is the largest financial package ever assembled by the European Commission. It funds key priorities, such as digital transition, climate action, and social fairness. The total budget exceeds €1.8 trillion, combining regular EU funding with the temporary NextGenerationEU recovery plan. For the first time, this includes direct grants—not just loans—to help countries recover after the pandemic.

Digitalisation remains central to this effort. The Digital Decade Policy Programme 2030([1]), adopted in 2022, sets concrete targets across four areas: digital skills, infrastructure, business transformation, and public services. These goals align with broader EU strategies to strengthen economic security, reduce external dependencies, and adapt labour markets to technological change. Funding instruments such as the Recovery and Resilience Facility (RRF), Cohesion Policy (CP), and Digital Europe Programme (DIGITAL) are the primary vehicles for channelling investments into these priorities.

This report updates the 2024 analysis of digital investments under the current MFF (Signorelli et al., 2024), using the latest available data to assess investments that can potentially affect the progress of Digital Decade targets. While the overall allocation patterns remain consistent with earlier findings, this update provides a timely snapshot of how funds are being budgeted across Member States and instruments. We focus on five key programs -RRF, CP, DIGITAL, Horizon Europe (HE), and Connecting Europe Facility-Digital (CEF-Digital)- to quantify their contributions to digital objectives, map investments to specific targets, and identify national and thematic trends. Compared to the previous report, we include updated data on RRF national plans budget, Cohesion Policy, and new work programs from Horizon Europe Work Programme (2025-27), DIGITAL Work Programme (2025-27), Connecting Europe Facility, and several Joint Undertakings (Chips, Innovative Health Initiative (IHI), Smart Networks System (SNS), and EuroHPC).

Our analysis provides four main findings. First, while RRF and CP account for more than 90% of total Digital Decade target spending, digital investments primarily target the digitalisation of business and public services. Second, there are still significant differences among countries in the absolute and relative amounts received and the targets that receive the funding, showing diverse objectives and digital priorities across countries.

The report is structured as follows. Section 2 outlines the methodology and updates to the dataset. Section 3 presents the main descriptive results. Section 4 discusses policy implications and concludes.

[1] Decision (EU) 2022/2481 of the European Parliament and of the Council of 14 December 2022 establishing the Digital Decade Policy Programme 2030 (OJ L 323, 19.12.2022, pp. 426). https://eur-lex.europa.eu/eli/dec/2022/2481/oj

2 Data and Methodology

This section outlines the funding instruments analysed and summarises the methodology.

2.1 Funding Instruments

We include five main funding instruments in our analysis:

- Recovery and Resilience Facility (RRF) 2020-2026[2];
- Cohesion Policy (CP) 2021-2027[3];
- Horizon Europe (HE) 2021-2027;
- Digital Europe Programme (DIGITAL) 2021-2027[4];
- Connecting Europe Facility – Digital (CEF-Digital) 2021-2027

For details about the objectives and legal framework of each fund, please see Signorelli et al. (2024).

Table 1. Funding instruments included in the study.

Funding Instrument and single components
Recovery and Resilience Facility (RRF) 2020-2026
Cohesion Policy (CP) 2021-2027
Horizon Europe (HE) 2021-2025
HE Main Work Programme
European Innovation Council (EIC) calls (2021-2022)
Chips and Key Digital Technologies (KDT) Joint Undertakings
European High-Performance Computing (EuroHPC) Joint Undertaking
Innovative Health Initiative (IHI) Joint Undertaking
Smart Networks and Services (SNS) Joint Undertaking
Digital Europe Programme (DIGITAL) 2021-2027
DIGITAL Main Work Programme (2021-22, 2023-24 and 2025-27)
Cybersecurity Work programme (2021-22, 2023-24-and 2025-27)
European Digital Innovation Hubs (EDIHs) Work Programme (2021-2023)
Chips Work Programme (annual Work Programmes2023-2027)
High-Performance Computing Work Programme (EuroHPC) (202122, 2023-24 and 2025-27)
Connecting Europe Facility – Digital (CEF-Digital) 2021-2027
CEF-Digital Main Work Programme
European High-Performance Computing (EuroHPC) Joint Undertaking

Source: JRC elaboration. Note: RRF includes RePowerEU. CP only includes the European Regional Development Fund (ERDF), the Cohesion Fund (CF), and the European Territorial Cooperation Fund (Interreg). HE includes main work programmes 2021-22, 2023-24 and 2025, four Joint Undertakings and the European Innovation Council (EIC) calls from the 2021-22 work programme. Chips and EuroHPC data affecting DIGITAL for 2026 and 2027, as well as the Cybersecurity Work Programme (2025-27), are retrieved from the DIGITAL 2025-27 main work programme and hence are not mapped at a granular level. HE main work programme 2025 was a draft at the time of the analysis. This may affect comparability with other reports analysing the same topic.

[2] Data accessed 10 March 2025.

[3] Data accessed 6 March 2025

[4] Our methodology does not account for the redistribution of budget and the use of leftovers for new calls, since we are not able to disentangle which actions should be reduced to fund a new call with leftover budget.

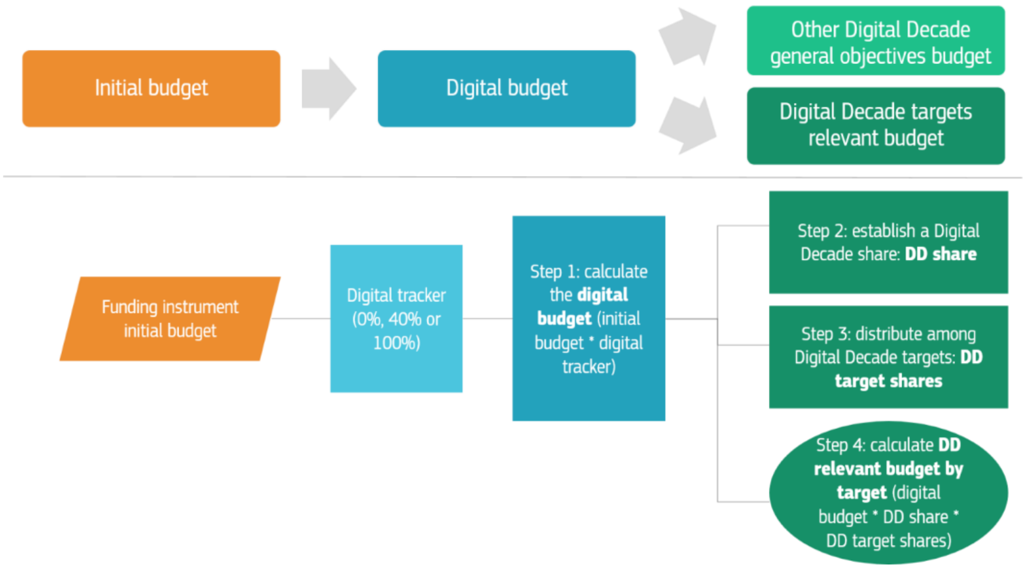
2.2 Methodology

To estimate the potential contribution of EU funds to Digital Decade (DD) targets, we implement the methodology developed and explained in Papazoglou et al. (2023) and Signorelli et al. (2024). This section provides a brief overview of the process. For further details, please refer to the 2023 and 2024 reports.

Figure 1 displays a flowchart summarizing the Digital Decade mapping process. The analysis follows four steps to quantify digital investments under the MFF and their alignment with DD targets. We begin by allocating the initial budget to each funding instrument, categorised by thematic objective, intervention field, topic or call (referred to as "categories") and encoded from the respective work programmes. Each category is assigned a digital tracker (0%, 40%, or 100%) reflecting its digital intensity (Step 1). For some instruments (e.g., DIGITAL, CEF-Digital), this tracker is fixed at 100%; for others (e.g., Innovative Health Initiative), it is set at 40%. The **digital budget** is then calculated by multiplying the initial budget by its digital tracker. We then assess each category's contribution to DD targets using a Digital Decade share (0%, 40%, or 100%), determining how much of the digital budget can directly support DD targets and objectives (Step 2). The DD-target relevant budget is calculated by multiplying the digital budget by the DD share. Finally, the DD-target relevant budget is distributed across the 15 DD targets. Each category is assigned DD target shares (0–100%), adding up to 100% (Step 3). The remaining digital budget not mapped to specific targets is classified as supporting general DD objectives.

As a novel approach, we used generative AI tools to map new 2025-27 calls instead of manually assessing categories. This reduces subjectivity in the manual process and makes classification more consistent. Specifically, we first input some pre-mapped calls to the model—a process known as "few shots"—and then input text calls from the new categories to map to Llama 3.3, asking it to return a Digital Decade share of 0, 40, or 100 (Step 2). We then input the same text to OpenAI GPT-4o, which returns a score between 0 and 100 for each target. We apply a threshold strategy, zeroing out all targets that receive a score below 40. The remaining scores are normalised to be between 0 and 1 to determine the DD target share (Step 3). We manually review the output and correct inconsistencies. A common issue arises when the model assigns a DD-share above 0 but no target scores reach at least 40. In these cases, we take a conservative approach and set the DD share to 0. Finally, European Commission experts from relevant policy DGs review steps 2 and 3 to reduce subjectivity in the manual classification and further supervise the automated process. In total, we map 406 new calls from Horizon Europe Main Work Programme 2025-27, Digital Europe Work Programme 2025-27, Connecting Europe Facility 2025-27, and Smart Network and Services, Chips, Innovative Health Initiative and European High Performance Computing Joint Undertakings (2025). This represents 25% of all calls mapped in the mentioned funds, and less than 5% of the overall budget.

Figure 1. Flowchart of the methodology to map funds to Digital Decade targets



Source: Signorelli et al. (2023).

2.3 Automation and Institutional implications

Besides being a cost-efficient methodology, the use of generative AI tools to map calls to Digital Decade targets also raises interesting reflections on the use of AI in public administration. First, it shows that policymakers may benefit from institutionalizing the mapping of funding to policy objectives such as the Digital Decade targets. Systematic and transparent tracking of budget allocation helps ensure that public funds are spent in alignment with strategic goals. Second, given the resource-intensive nature of manual mapping, investments in semi-automated tools powered by generative AI can enhance the efficiency of public fund tracking. These tools can help reduce the time and effort required to manually classify funding calls, especially in straightforward cases, without sacrificing accuracy in high-impact areas. The model offers potential labour savings for straightforward cases but still requires human supervision for more complex situations. In general, given the intensity of manual and operational work involved in this task, potential labour savings may offset the costs of decreased precision compared to manual allocation of targets and DD shares. Human oversight remains crucial. Currently, a hybrid model combining AI-generated classification with expert validation maximises both efficiency and accuracy.

The exercise of automated mapping would benefit from developing common practices, benchmarks, structured files, and evaluation metrics across all funding instruments. This would allow consistent comparisons, facilitate improvements over time, and enhance trust in the methodology. This should go hand in hand with making the AI methodology and classification outcomes publicly accessible, promoting transparency and trust in how EU funds are monitored. Finally, the reliance on ad-hoc, manual data collection highlights a broader capacity gap within public administration. To fully benefit from semi-automated tools like generative AI, institutions must invest in building internal capabilities. This includes investments in data skills or AI literacy.

3 Results

In this section, we present descriptive evidence on the allocation of EU funding toward digital initiatives across main funding instruments. It provides disaggregated information about the budget allocated to each cardinal point from the Digital Decade Policy Programme and on a more granular level to each target and analyses the distribution by Member State. The full dataset is available at the JRC Data Catalogue ([5]).

3.1 Overall Results

Following our methodology, we first look at the starting budget for each funding program, which we convert to digital budget and, finally, to Digital Decade spending by applying their respective shares. We also track general Digital Decade objectives funding, defined as the difference between digital budget and DD-target relevant budget.

Before diving into how each fund supports DD targets, we can look at the overall picture. Table 2 shows that, from the initial €973 billion across the five funds, €207 billion (21%) goes to digital initiatives. From this digital budget, €177 billion supports DD targets specifically, representing 86% of all digital funding.

Table 2. Initial, digital and DD-targets relevant budget (million EUR) by funding instrument

Fund	Total Budget(€ million)	Digital Budget					
		Total Digital Budget(€ million)	% over Total Budget	Digital Decade general objectives		Digital Decade Target Budget	
				(€ million)	%	(€ million)	%
Total	**973,195**	**207,067**	**21%**	**29,577**	**3%**	**177,490**	**18%**
Recovery and Resilience Fund	*655,531*	*149,813*	*23%*	*14,070*	2%	*135,743*	21%
Cohesion Policy	*264,066*	*29,594*	*11%*	*4,256*	2%	*25,338*	10%
Horizon Europe	*43,667*	*17,730*	*41%*	*9,640*	22%	*8,090*	19%
Digital Europe Programme [6]	*8,124*	*8,124*	*100%*	*1,234*	15%	*6,890*	85%
Connecting Europe Facility - Digital	*1,806*	*1,806*	*100%*	*376*	21%	*1,430*	79%

Note: Total funding includes those funds stated in Table 1. See footnote in Table 1 for further information about included funds. Digital budget refers to funding with a digital component. Digital Decade general objectives budget refers to funding with a digital component but no direct correspondence with at least one of the 15 Digital Decade targets. Digital Decade target budget is the amount of funding with a digital component and a direct relation to at least one of the Digital Decade targets. RRF funding without considering RePowerEU is €591,257 mn in total budget, €148,493 mn in digital budget and €135,553 mn in funding Digital Decade targets. Source: JRC calculations.

[5] Dataset available here: https://data.jrc.ec.europa.eu/dataset/0deff04a-226b-4eb5-ad6a-47bd1088c278

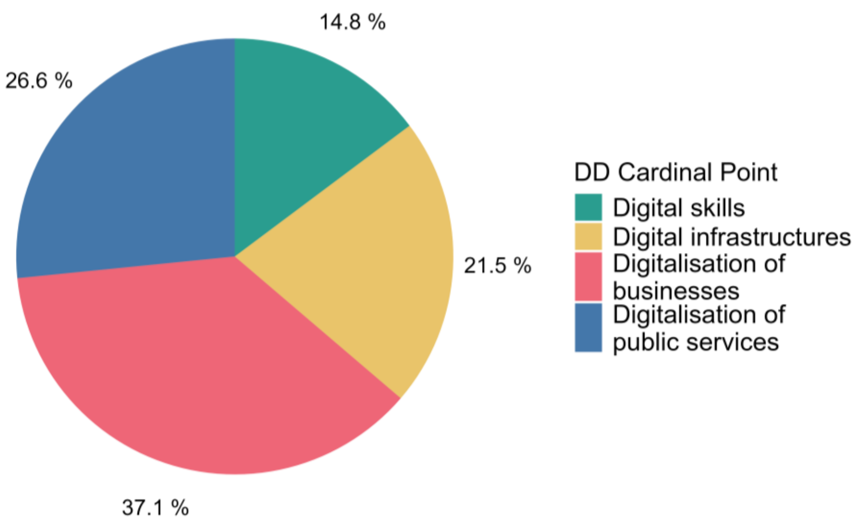
[6] The total funding for the Digital Europe Programme is the sum of the planned budget per topic from all DIGITAL work programmes, including JUs. It does not take into account the budget actually committed or the redistribution of available funds across time.

The intensity of digital and DD contribution across funds is heterogeneous. RRF and Cohesion Policy are the largest funds and, hence, the ones that provide funding to a wider range of areas. Thus, only 21% and 10% of RRF and Cohesion respectively contribute to Digital Decade targets. Conversely, the Digital Europe Programme and Connecting Europe Facility funds are much more focused on digitalisation policies, thus 85% and 79% of their budget can potentially impact DD targets.

3.2 DD target spending across funds and targets

Our data allows us to disentangle how much budget has been allocated to each Digital Decade cardinal point. Figure 2 shows that 37% of the DD spending targets the digitalisation of businesses, while around 26% contributes to the digitalisation of public services. Digital infrastructures receive 21.5% of the budget, while digital skills receive the remaining 15%.

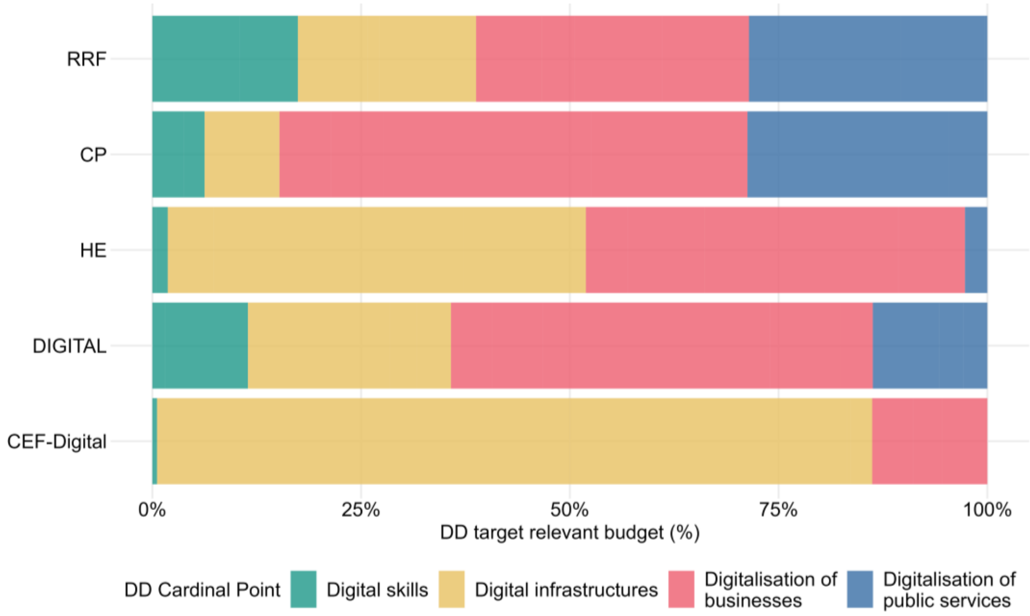
Figure 2. DD target relevant budget by DD cardinal point (%)



Source: JRC calculations.

This specialisation pattern is also evident in Figure 3, where the percentage of budget allocated to each cardinal point by each funding instrument is displayed. The Recovery and Resilience Facility (RRF) presents the most homogeneous distribution across cardinal points, with a slightly larger focus on the digitalisation of businesses and public services. Cohesion Policy focuses more specifically on businesses, DIGITAL allocates a larger share of funds to digitalizing businesses; CEF shows a strong focus on digital infrastructure, and finally, Horizon devotes 95% of its budget to infrastructure and the digitalisation of businesses. This specialisation pattern reflects the different scopes and objectives of each fund.

Figure 3. DD target relevant budget by Funding Instrument and Cardinal Point (%)



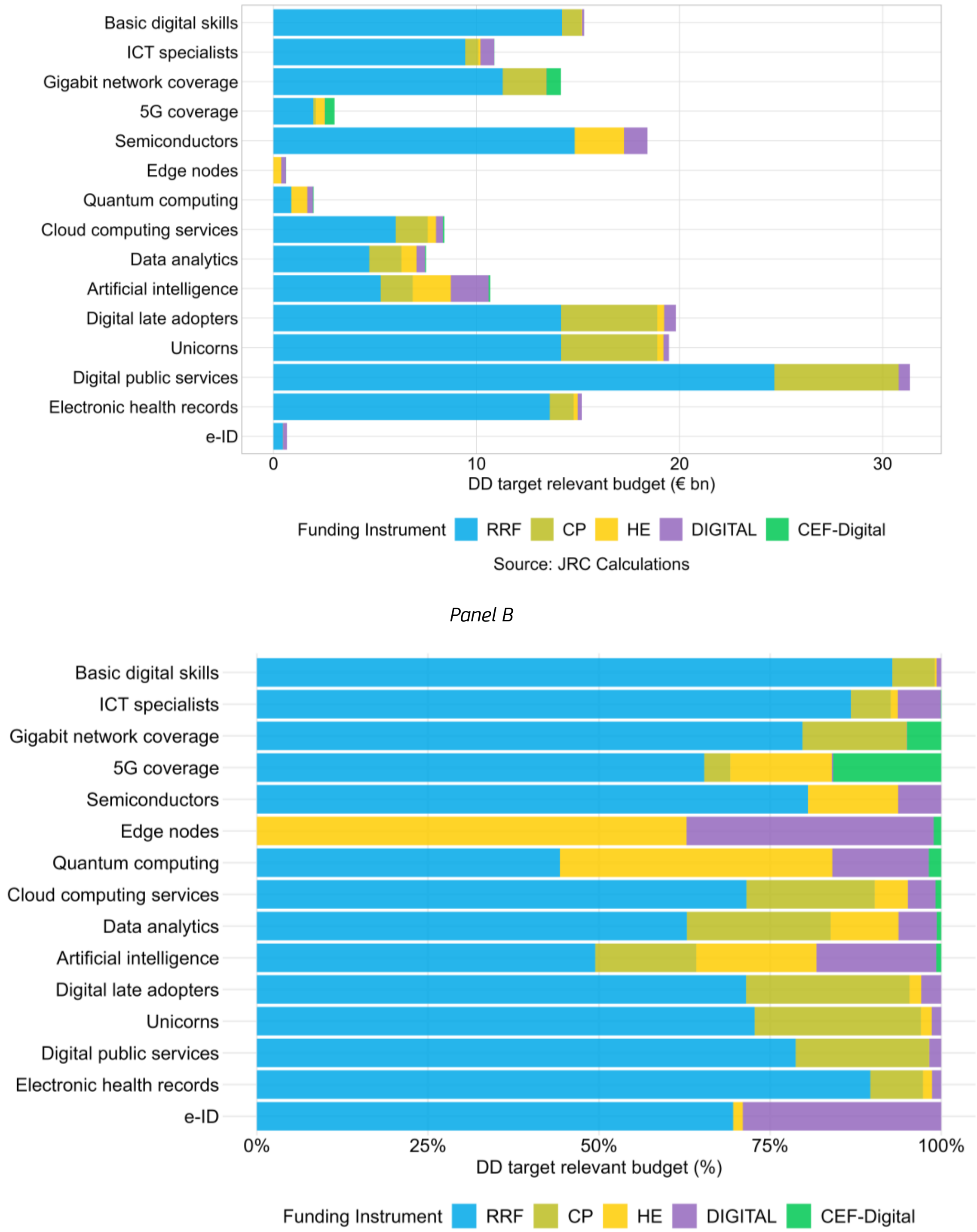
Source: JRC calculations.

Figure 4 displays the amount of budget that each target receives from each of the main funding instruments analysed. The target that receives the largest amount of budget is the digitalisation of public services, with more than €30 billion. Among the three uptake technologies technologies, AI receives the largest amount (€10.7 billion), especially from funds like Horizon Europe and the Digital Europe Programme, signalling the EU's emphasis on accelerating the uptake of this technology. Significant aid is also provided to scale-ups and SMEs, with €19.8 billion expected to contribute to improving basic digitalisation of SMEs and €19.4 billion in upscaling startups, respectively. Finally, less emphasis and resources are being provided to more advanced and critical technologies in Europe, such as quantum computing.

Semiconductors receive a substantial share of Horizon Europe funds, especially from the Chips Joint Undertaking. Moreover, a significant part of the relevant budget comes from the Spanish Resilience plan, which dedicates €11.9 billion to incentivise the semiconductors sector. Quantum Computing, another critical technology for the EU, receives the second smallest amount of investments. Lastly, the mapping also considers potential indirect effects, meaning that, for example, investments related to AI can be mapped to the uptake of AI by firms even if their focus is primarily on AI research rather than explicitly targeting businesses' uptake. Such investments can still positively influence businesses' AI uptake by fostering the development of new AI solutions that they can use over time. This may be one of the elements explaining the large amounts of budget mapped into AI/Data Analytics and Cloud, or to Unicorns and Digital Late adopters.

Figure 4. DD target relevant budget by DD target (€ bn and %)

Panel A



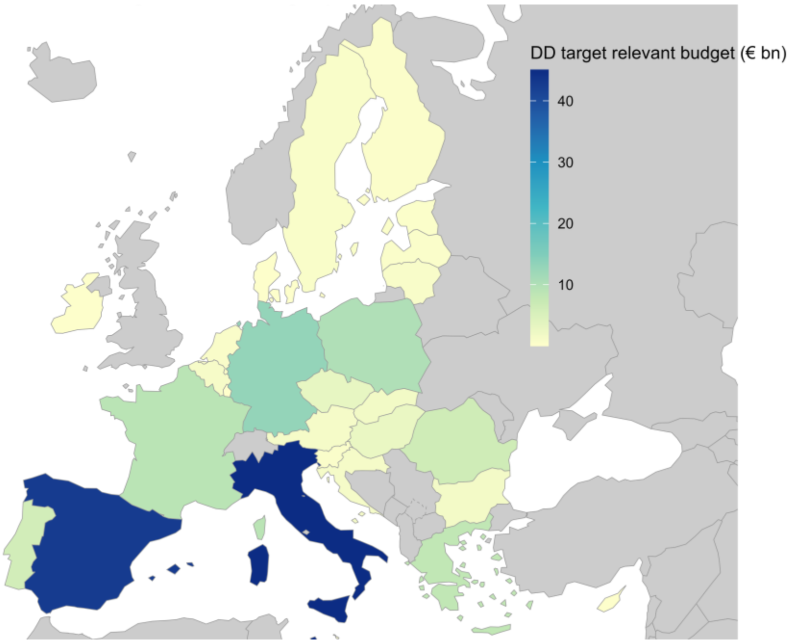
Source: JRC calculations

3.3 Allocation by Member State

Our data also allows us to further analyse the geographical distribution of Digital Decade spending across Member States from the Recovery and Resilience Facility (RRF) and Cohesion Policy (CP).

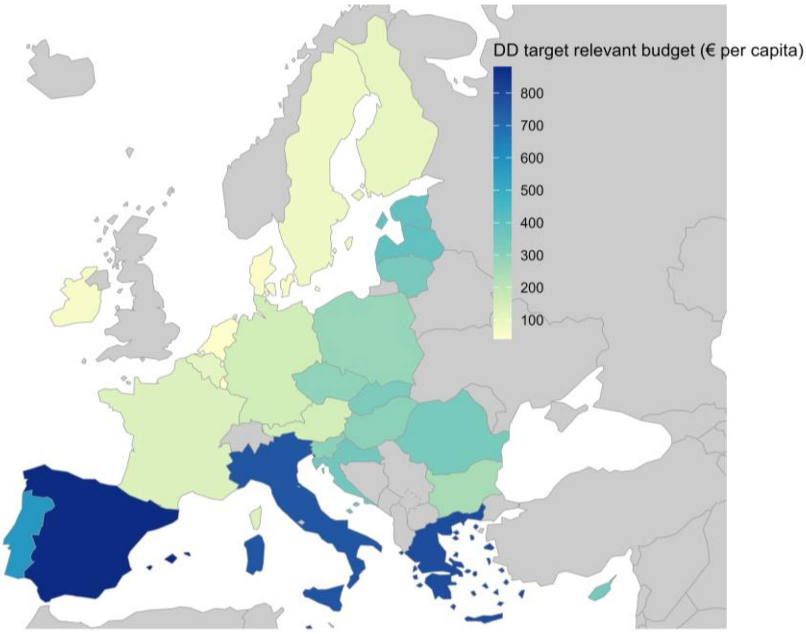
Figure 5 shows the Digital Decade spending in € billion by Member State. It is evident that, in absolute terms, Italy and Spain are the countries receiving the largest digital budget allocations, around €45 billion and €43billion, respectively. In per capita terms (see figure 6), Spain still receives the largest budget allocation for Digital Decade spending, with €880 per capita over the 2021-2026 period. Italy and Greece also have a large per capita allocation of €763 and €787 per inhabitant. Balkan and Eastern European countries tend to receive a larger DD target-relevant budget allocation than Central and Northern European countries in per capita terms. Baltic countries receive close to €400 per capita, and Slovakia, Croatia, Romania, and Slovenia around €300 per capita.

Figure 5. RRF and CP DD target relevant budget by MS (€ bn)



Source: JRC calculations. Administrative boundaries: © EuroGeographics. Cartography data downloaded using giscoR. The designations employed and the presentation of material on the map do not imply the expression of any opinion whatsoever on the part of the European Union concerning the legal status of any country, territory or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Kosovo boundaries without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Figure 6. RRF and CP DD target relevant budget by MS (€ per capita)

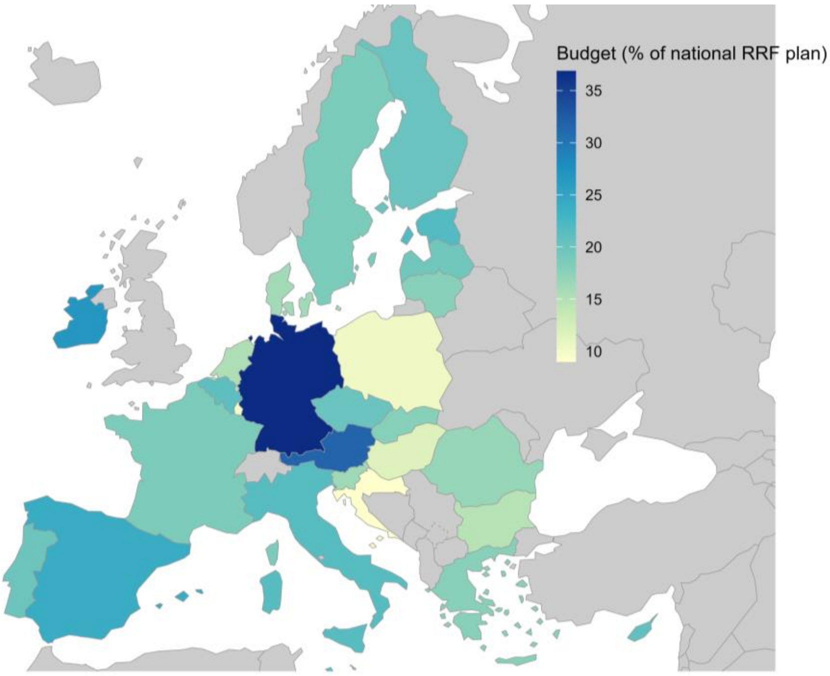


Source: Eurostat (Population, 1st January 2024) and JRC calculations. Administrative boundaries: © EuroGeographics. Cartography data downloaded using giscoR. The designations employed and the presentation of material on the map do not imply the expression of any opinion whatsoever on the part of the European Union concerning the legal status of any country, territory or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Kosovo boundaries without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

An interesting analysis involves measuring RRF target spending as a share of the total available RRF budget. Seventy percent of RRF allocation grants are determined based on indicators such as population, GDP per capita, or the unemployment rate. The other 30% is allocated based on the observed cumulative loss in real GDP during the 2020-21 COVID pandemic. Therefore, the previously described allocation is not surprising. However, the RRF regulation states that each Member State should spend at least 20% of the allocation on measures that support the digital transition. Thus, even when the total allocation is somewhat predetermined by exogenous factors such as unemployment or population, the amount devoted to the Digital Decade is a more discretionary decision that reflects country priorities regarding this policy program.

Figure 7 shows this metric at the country level. It is visible that DD target spending is more intense in Germany, Austria, and Ireland, which spend 37%, 32%, and 27% of their RRF spending, respectively. Interestingly, this indicator has experienced a downward trend since 2023, when these three countries planned to spend 45%, 40%, and 31% of their RRF budget on DD targets, respectively (Papazoglou et al., 2023). In general, the EU have experienced a reduction in the share of planned RRF DD target spending over total RRF budget over time, going from 23% in 2023 to 20% in 2025. This is due to two factors. First, to the large increase in RRF budget from 2023 and 2025 (€506bn vs €656n), mainly due to the addition of REPowerEU chapters to the RRPs. As REPower EU focuses on the green transition and secure and sustainable energy provision, the overall budget increase was proportionally larger than the increase in budget mapped to DD targets (€116.8 bn vs €135.7 bn). And second, and to a lesser extent, to the slight decrease in RRF budget mapped to DD targets between 2024 and 2025 (€135.9 bn vs €135.7bn).

Figure 7. Share of DD target relevant RRF spending over total RRF budget (%)



Source: JRC calculations. Administrative boundaries: © EuroGeographics. Cartography data downloaded using giscoR. The designations employed and the presentation of material on the map do not imply the expression of any opinion whatsoever on the part of the European Union concerning the legal status of any country, territory or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Kosovo boundaries without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Figure 8's heatmap shows countries in rows and Digital Decade targets in columns. The colour of each cell darkens as more budget is allocated to a specific target relative to the country's total budget for these goals stemming from RRF and CP. As shown in the heatmap, Member States spend the largest share of their budget on online public services. Most countries present this specialised pattern, while others, such as Italy, Poland, and Spain, present a broader distribution of budget across DD targets. For example, Italy shows large investments in Basic Digital Skills, digitalisation of SMEs and startups, and Gigabit connectivity. Poland is the second-largest investor in Gigabit connectivity, while also investing a relevant share of its budget in digital skills. Spain presents a particularly large budget for Semiconductors, which accounts for 81% of total planned EU investments in chips. These differences can be attributed to variations in countries' funding mixes, with some relying more on national budgets and others on EU funds.

Figure 8. Heatmap: CP and RRF DD target relevant budget by Member State and DD target (€ mn, 2021-27 MFF)

Country Name	Basic digital skills	ICT specialists	Gigabit network coverage	5G coverage	Semi-conductors	Edge nodes	Quantum computing	Cloud computing services	Data analytics	AI	Digital late adopters	Unicorns	Digital public services	eHealth records	e-ID	Total
Belgium	144	96	34	0	20	0	0	53	53	53	160	160	426	55	0	**1,254**
Bulgaria	184	124	272	0	0	0	1	63	63	63	190	190	372	73	0	**1,595**
Czechia	276	184	409	60	35	0	19	137	137	137	411	411	758	223	0	**3,197**
Denmark	0	0	13	0	0	0	0	25	25	25	74	74	84	9	0	**329**
Germany	1,022	681	4	0	1,500	0	21	999	249	249	747	747	3,792	3,041	0	**13,052**
Estonia	12	8	86	0	0	0	0	22	22	22	67	67	233	0	0	**539**
Ireland	38	25	0	19	0	0	0	20	20	20	60	60	10	75	0	**347**
Greece	489	326	1,476	0	0	0	0	336	336	336	1,007	1,007	2,554	320	0	**8,187**
Spain	2,947	1,969	1,483	1,615	11,951	0	20	1,752	1,752	2,312	5,256	5,256	5,842	627	0	**42,782**
France	1,082	673	387	300	0	0	350	319	319	319	958	958	1,187	2,068	30	**8,950**
Croatia	134	109	207	0	0	0	0	61	61	61	182	182	304	66	1	**1,368**
Italy	4,457	2,972	5,307	15	790	0	0	2,574	2,124	2,124	6,372	6,372	6,595	5,049	285	**45,036**
Cyprus	14	10	45	0	0	0	0	11	11	11	34	34	134	16	0	**320**
Latvia	68	45	24	0	0	0	0	35	35	35	106	106	263	21	0	**738**
Lithuania	96	64	95	3	0	0	0	34	34	34	101	101	327	86	0	**975**
Luxembourg	1	1	0	0	0	0	0	1	1	1	4	4	15	1	0	**29**
Hungary	343	228	207	0	0	0	0	144	144	144	432	432	312	480	0	**2,866**
Malta	2	1	0	0	0	0	0	5	5	5	15	15	54	17	0	**119**
Netherlands	173	115	0	0	0	0	264	11	11	11	32	32	169	75	0	**893**
Austria	224	149	456	0	125	0	107	24	24	24	72	72	107	10	0	**1,394**
Poland	1,214	809	2,002	61	0	0	0	345	245	245	734	734	2,526	1,187	0	**10,102**
Portugal	959	640	160	5	0	0	0	267	267	267	801	801	1,512	412	0	**6,091**
Romania	766	511	94	0	400	0	0	217	217	217	651	651	2,096	538	150	**6,508**
Slovenia	55	37	48	1	0	0	0	23	23	23	68	68	208	83	0	**637**
Slovakia	216	144	112	0	0	0	87	53	53	53	158	162	714	42	0	**1,794**
Finland	38	25	32	0	15	0	10	21	21	21	64	64	100	153	0	**564**
Sweden	119	80	488	3	0	0	0	15	15	15	44	44	34	2	0	**859**

Note: The heatmap displays the target specialisation of the Member States' RRF and CP budget jointly. The colour on each row reflects the relative amount of the Member State's RRF and CP investment in a target compared to the country's RRF and CP investment in all targets. The darker the cell colour, the higher the amount allocated to that target. Source: JRC calculations

4 Conclusions

In this report, we update and analyse a unique dataset that allows us to quantify investments in Digital Decade targets under the 2021-2027 Multiannual Financial Framework. We also provide an update on last year's results and insights on the budget and effective implementation of the planned investments.

Our results stress the importance of the Recovery and Resilience Fund (RRF) in leveraging a successful digital transformation. RRF represents 76.4% of the total Digital Decade investments stemming from EU funding instruments, and national Recovery and Resilience Plans will be critical to achieving its targets. The analysed budget shows a strong focus on the digitalisation of public services and businesses. Most of the budget is allocated to the online provision of key public services, the uptake of digital technologies by firms (AI/Data Analytics/Cloud), and the basic digitalisation of SMEs and innovative scale-ups. Other targets critical for Europe's autonomous strategy, such as quantum computing, receive the least amount of budget. Other funding instruments contribute by targeting specific areas in a specialised manner.

At the country level, Italy, Spain, Greece, and Portugal receive the largest amount of funds relevant to Digital Decade targets in per capita terms. Germany, Austria, and Ireland are the countries that spend more of their RRF available budget on measures that may affect Digital Decade targets. The target distribution across countries is quite homogeneous, with most countries allocating the largest amounts of budget in the digitalisation of public services and the basic digitalisation of businesses. However, other targets are addressed as well, with considerable budget in some cases, such as Spain in semiconductors or Poland in connectivity infrastructure.

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List of abbreviations and definitions

5G	Fifth-generation wireless
AI	Artificial Intelligence
BUDG	Directorate-General for Budget
CEF-Digital	Connecting Europe Facility – Digital
CF	Cohesion Fund
Chips	Chips Joint Undertaking
CNECT	Directorate-General for Communications Networks, Content and Technology
CP	Cohesion Policy
DD	Digital Decade
DG	Directorate-General
DIGIT	Directorate-General for Digital Services
DIGITAL	Digital Europe Programme
ECFIN	Directorate-General for Economic and Financial Affairs
EDIH	European Digital Innovation Hub
e-Health	Electronic health
EIC	European Innovation Council
e-ID	Electronic identification
ERDF	European Regional Development Fund
EU	European Union
EuroHPC	European High-Performance Computing Joint Undertaking
FISMA	Directorate-General for Financial Stability, Financial Services and Capital Markets Union
GDP	Gross domestic product
GROW	Directorate General for Internal Market, Industry, Entrepreneurship and SMEs
HE	Horizon Europe
ICT	Information and Communications Technology
IHI	Innovative Health Initiative Joint Undertaking
Interreg	European Territorial Cooperation Fund
JRC	Joint Research Centre
JU	Joint Undertaking
JUST	Directorate-General for Justice and Consumers

KDT	Key Digital Technologies Joint Undertaking
MFF	Multiannual financial framework
MS	Member State
PERTE	Strategic Project for Economic Recovery and Transformation
REGIO	Directorate-General for Regional and Urban Policy
R&I	Research and Innovation
RRF	Recovery and Resilience Facility
RTD	Directorate-General for Research and Innovation
SME	Small and Medium-sized Enterprise
SNS	Smart Networks and Services Joint Undertaking
WP	Work programme

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Annexes

Data sources and limitations of the mapping

Data sources

Funding Instrument / Component		**Data sources**
Recovery and Resilience Facility (RRF)		IT tool FENIX (Directorate-General for Economic and Financial Affairs (DG ECFIN)). Last access: 10 March 2025
Cohesion Policy (CP)		The available data are publicly accessible from the Cohesion Open data platform ([7]) and cover the period from 2021 to 2027. Last access: 6 March 2025
Horizon Europe (HE)	Horizon Europe (HE) main work programmes	Dataset provided by Directorate-General for Communications Networks, Content and Technology (DG CNECT) (WP 2021-2022) and Directorate-General for Research and Innovation (DG RTD) (WP 2023-24, WP 2025).
	European Innovation Council (EIC) calls	Dataset provided by the European Innovation Council (EIC) (WP 2021-22).
	Chips Joint Undertaking	DECISION CHIPS GB 2024.92 Adopting the multiannual work programme for the years 2023-27 and introducing appendixes 4 and 6 for the activities in 2025 DECISION CHIPS GB 2023.58 Adopting the multiannual work programme for the years 2023-2027 and repealing decision GB 2023.51 DECISION KDT GB 2022.35 approving the Key Digital Technologies Joint Undertaking's annual budget for the year 2023 DECISION KDT GB 2022.23 adopting the first amendment of the Joint Undertaking's annual budget for the year 2022 DECISION KDT GB 2022.36 Adopting KDT work programme for the year 2023 KDT GB 2022.26 WORK PROGRAMME 2022 V16 – 29 August 2022 KDT ED 2022.27 WORK PROGRAMME 2021 V13_2022-02-24
	European High-Performance Computing (EuroHPC)	DECISION OF THE COVERNING BOARD OF THE EuroHPC JOINT UNDERTAKING No 66/2024 Adopting the Joint Undertaking's Work Programme and Budget for the year 2025

[7] Available at: https://cohesiondata.ec.europa.eu/

	Joint Undertaking	DECISION OF THE GOVERNING BOARD FO THE EuropHCP JOINT UNDERTAKING No 68/2024 Amending the Joint Undertaking's Work Programme and Budget for the year 2024 (Amendment no 7) DECISION OF THE GOVERNING BOARD OF THE EuroHPC JOINT UNDERTAKING No 44/2023 Adopting the Joint Undertaking's Work Programme and Budget for the year 2024 DECISION OF THE GOVERNING BOARD OF THE EuroHPC JOINT UNDERTAKING No 54/2023 Amending the Joint Undertaking's Work Programme and Budget for the year 2023 (Work Programme and Budget Amendment no. 8) DECISION OF THE GOVERNING BOARD OF THE EuroHPC JOINT UNDERTAKING No 07/2022 Amending the Joint Undertaking's Work Plan and Budget for the year 2022 (Work Programme and Budget Amendment no. 2)
	Smart Networks and Services (SNS) Joint Undertaking	ANNEX I TO DECISION No XX/2024 OF THE GOVERNING BOARD OF SMART NETWORKS AND SERVICES JOINT UNDERTAKING ANNEX II TO DECISION No 21/2023 OF THE GOVERNING BOARD OF SMART NETWORKS AND SERVICES JOINT UNDERTAKING SNS R&I Work Programme 2024 ANNEX II TO DECISION No 03/2022 OF THE GOVERNING BOARD OF SMART NETWORKS AND SERVICES JOINT UNDERTAKING SNS R&I Work Programme 2021-2022
	Innovative Health Initiative (IHI) Joint Undertaking	Innovative Health Initiative 2024 Work Programme Innovative Health Initiative 2023 Amended Work Programme Innovative Health Initiative 2022 Second Amended Work Programme Innovative Health Initiative Second Amended Annual Work Plan and Budget for 2021
Digital Europe Programme (DIGITAL)	Digital Europe Programme (DIGITAL) main Work Programme, Cybersecurity and European Digital Innovation Hubs (EDIHs)	ANNEX to the Commission Implementing Decision on the financing of the Digital Europe Programme and the adoption of the multiannual work programme for 2025-2027 - DRAFT[8] ANNEX to the Commission Implementing Decision amending Commission Implementing Decision C (2023) 1862 final on the financing of the Digital Europe Programme and the adoption of the work programme for 2023 - 2024, as modified by Commission Implementing Decision C(2023) 8620 final (C(2024) 1902 final ANNEX) ANNEX to the Commission Implementing Decision amending the Commission Implementing Decision C (2023) 1862 final on the financing of the Digital Europe Programme and the adoption of

[8] Final Digital Europe Programme WP was published at the end of March.

		the work programme for 2023 – 2024 (C(2023) 8620 final ANNEX 1)
		ANNEX to the Commission Implementing Decision amending the Commission Implementing Decision C (2023) 1862 final on the financing of the Digital Europe Programme and the adoption of the work programme for 2023 – 2024 (C(2023) 8620 final ANNEX 2)
		ANNEX to the Commission Implementing Decision on the financing of the Digital Europe Programme and the adoption of the multiannual work programme for 2021 – 2022 (C(2021) 7914 final – Annex)
		ANNEX to the Commission Implementing Decision on the financing of the Digital Europe Programme and adoption of the multiannual work programme - Cybersecurity for 2021 – 2022 (C(2021) 7913 final - Annex)
		ANNEX to the Commission Implementing Decision on the financing of the Digital Europe Programme and adoption of the multiannual work programme – European Digital Innovation Hubs for 2021 – 2023 (C(2021) 7911 final - Annex)
		Strategic orientations for Digital Europe Programme. Work Programme 2025-2027 (provided by Directorate-General for Communications Networks, Content and Technology (DG CNECT)). 12 April 2024
	Chips Joint Undertaking	DECISION CHIPS GB 2024.92 Adopting the multiannual work programme for the years 2023-27 and introducing appendixes 4 and 6 for the activities in 2025
		DECISION CHIPS GB 2023.58 Adopting the multiannual work programme for the years 2023-2027 and repealing decision GB 2023.51
	European High-Performance Computing (EuroHPC) Joint Undertaking	DECISION OF THE GOVERNING BOARD FO THE EuropHCP JOINT UNDERTAKING No 68/2024 Amending the Joint Undertaking's Work Programme and Budget for the year 2024 (Amendment no 7)
		DECISION OF THE GOVERNING BOARD OF THE EuroHPC JOINT UNDERTAKING No 44/2023 Adopting the Joint Undertaking's Work Programme and Budget for the year 2024
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		DECISION OF THE GOVERNING BOARD OF THE EuroHPC JOINT UNDERTAKING No 07/2022 Amending the Joint Undertaking's Work Plan and Budget for the year 2022 (Work Programme and Budget Amendment no. 2)

Connecting Europe Facility (CEF) – Digital	Connecting Europe Facility (CEF) – Digital	ANNEX to the Commission Implementing Decision on the financing of the Connecting Europe Facility – Digital sector and the adoption of the multiannual work programme for 2024-2027 ANNEX to the Commission Implementing Decision amending implementing Decision C(2021)9463 on the financing of the Connecting Europe Facility – Digital sector and the adoption of the multiannual work programme for 2021-2025 (C(2023) 2533 final - Annex)
	European High-Performance Computing (EuroHPC) Joint Undertaking	DECISION OF THE GOVERNING BOARD FO THE EuropHCP JOINT UNDERTAKING No 68/2024 Amending the Joint Undertaking's Work Programme and Budget for the year 2024 (Amendment no 7) DECISION OF THE GOVERNING BOARD OF THE EuroHPC JOINT UNDERTAKING No 44/2023 Adopting the Joint Undertaking's Work Programme and Budget for the year 2024 DECISION OF THE GOVERNING BOARD OF THE EuroHPC JOINT UNDERTAKING No 54/2023 Amending the Joint Undertaking's Work Programme and Budget for the year 2023 (Work Programme and Budget Amendment no. 8) DECISION OF THE GOVERNING BOARD OF THE EuroHPC JOINT UNDERTAKING No 07/2022 Amending the Joint Undertaking's Work Plan and Budget for the year 2022 (Work Programme and Budget Amendment no. 2)

Limitations

The allocation of budget across DD targets is an exercise that relies heavily on the qualitative assessment of text calls, which by nature includes a certain degree of subjectivity. Equally, we acknowledge the possible existence of projects and funding instruments that may potentially affect the achievement of the Digital Decade targets and we do not account for them. Finally, some targets face limitations in our ability to map due to synergies with other related technologies. For example, HPC calls can include investments in Quantum computing, even when they are different technologies. Equally, the deployment of edge nodes can be integrated as part of broader connectivity infrastructures, which makes difficult to disentangle which exact amounts go to each target. Hence, the mapping should be considered a broad estimate of the actual budget with the potential to affect Digital Decade targets.

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